

ABSTRACT OF THE DISCLOSURE

A hydraulic coupling system includes a pump, a controller, a clutch assembly, and a valve. The clutch assembly includes an actuator and a multi-disk clutch pack coupled to the actuator. Under the direction of the controller, the pump pressurizes a fluid in the actuator to engage the clutch pack and pumps the fluid through the clutch pack to cool the clutch pack. The valve maintains the fluid pumped to the actuator at a higher pressure than the pressure of the fluid pumped through the clutch pack to cool the clutch.